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Effect of Academic Burnout on Self-Esteem in Nursing Students: Mediating Role of Resilience

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Abstract

Background/Objectives: The objective of this study was to determine the effect of academic burnout on self-esteem of nursing students and the mediating role of resilience in such effect.

Methods/Statistical analysis: Academic burnout, self-esteem, and resilience were evaluated for 209 nursing students. For data analysis, descriptive statistics, t-test, analysis of variance, Pearson's correlation, and mediator regression were performed using SPSS 25.0. The Sobel test was used to verify the significance of mediating role.

Findings: Academic burnout had a significant negative effect on resilience ($\beta = -.53, p < .001$) and self-esteem ($\beta = -.52, p < .001$). Both academic burnout ($\beta = -.26, p < .001$) and resilience ($\beta = .48, p < .001$) were found to have significant effects on self-esteem ($F = 77.03, p < .001$). As a result of conducting the Sobel test to test the significance of the mediating role of resilience, it was confirmed that resilience was a partial parameter in the relationship between academic burnout and self-esteem ($Z = -5.80, p < .001$).

Conclusion: The reduce academic burnout of nursing students and increase their resilience, it is necessary to develop teaching methods and courses and to develop extracurricular programs.

Keywords: *Academic Burnout, Nursing Students, Resilience, Self-Esteem*

Introduction

Due to recent acceleration of changes in the medical environment and the increase in

expectations for health care services, the clinical field requires excellent nursing personnel with competence [1]. Nursing students not only need to acquire specialized knowledge, but also need to receive clinical practice education to acquire clinical performance skills such as basic roles and skills of nurses. Heavy studies and clinical practice put a lot of pressure on school life. If this is not actively dealt with, academic burnout appears as a result of poor health, incompetence, and apathy

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toward schoolwork [2].

Academic burnout is a state in which the sense of achievement in school is reduced due to chronic academic stress and excessive workload [3]. This can act as a negative factor leading to atrophy and frustration for those with a nursing major [4]. A previous study has reported that excessive learning and clinical practice of nursing students are related to academic burnout [5]. In particular, it has been found that academic burnout is the greatest when a major upon entering a university is selected based on a recommendation from surroundings [6]. Therefore, it is necessary to make a prudent decision when selecting nursing as a major.

It is essential for nursing students to have high-esteem because people with high self-esteem can realize themselves by accepting and respecting themselves and having a positive identity [7]. Self-esteem refers to self-respect, desirable, and perceived worth [4]. It has an important influence in determining an individual's behavior. It becomes a source of competence that gives confidence in performing nursing tasks [8]. Previous studies have shown that the higher the self-esteem, the lower the academic burnout [9]. This has an important effect on resilience which is a positive identity and an ability to cope with crisis situations without being greatly affected by external negative evaluations [10].

Resilience refers to the ability to relieve stress and successfully adapt as mental resistance to solve difficulties and return to a normal state [11]. Nursing students with high resilience have an active and flexible life attitude. They can actively cope with stress with a high adaptability to external

environments [12]. In particular, when faced with stress of clinical practice situations, resilience is very important because it overcomes them well and enables efficient clinical practice [13]. Previous studies have confirmed that resilience is an important factor for positive self-esteem formation [8, 10]. The objective of this study was to determine the effect of academic burnout on self-esteem and the mediating role of resilience in this effect.

Methods

1. Research design

This was a descriptive research study to determine the mediating role of resilience in the effect of academic burnout on self-esteem of nursing students.

2. Data collection

For ethical consideration of study subjects, data were collected after obtaining approval from the Institutional Review Board (IRB) of S university (IRB No: SMU-2020-08-008). This study performed convenience extractions for students (all grades) of nursing departments at two universities. A total of 210 questionnaires were distributed and a total of 209 questionnaires were finally analyzed after excluding those who answered insincerely. The collection period was from September 7th, 2020 to September 18th, 2020.

3. Research tools

3.1 Academic burnout

The Korean version of the Maslach burnout inventory-student survey (MBI-SS) developed by Schaufeli et al. [14] and reviewed by Shin et al. [15] for validity using confirmatory factor analysis was

used. It consisted of 15 questions. The higher the score, the higher the academic burnout. At the time of tool development, its Cronbach's α value was .87. In this study, its Cronbach's α value was .89.

3.2 Self-esteem

A tool developed by Rosenberg^[16] and adapted by Jon^[17] was used. It consisted of a total of 10 items. The higher the score, the higher the self-esteem. At the time of tool development, Cronbach's α was .85. In this study, Cronbach's α was .85.

3.3 Resilience

The Connor-Davidson Resilience Scale (CD-RISC) developed by Connor & Davidson^[18] and translated to the Korean version of the Resilience Tool (K-CD-RISC; Korean Connor Davidson Resilience Scale) by Baek et al.^[19] was used. It consisted of a total of 25 items. The higher the score, the higher the resilience. At the time of tool development, Cronbach's α was .89. In this study, Cronbach's α was .89.

4. Data analysis

All data were analyzed using SPSS WINDOW 25.0 Program. Descriptive statistics, t-test, analysis of variance (ANOVA), and Pearson's correlation coefficients were performed or determined. Mediator regression was performed according to guidelines of Baron & Kenny^[20]. The Sobel test was used to verify significance.

Results

1. General characteristics

The average age was 22.74 years old. There were 163 (78.0%) students younger than 23 years

old and 163 (78.0%) female students. A total of 69 (33.0%) students were third graders in college. There were 129 (61.7%) students who did not have any religion. The academic score was 3.0-3.9 for 141 (67.5%) students [Table 1].

2. Levels of academic burnout, self-esteem, and resilience

Academic burnout had an average score of 2.58 ± 0.56 points out of five points. By sub-area, exhaustion had the highest score and cynicism had the lowest score. The average score for self-esteem was 2.94 ± 0.45 out of four points. The average score for resilience was 3.66 ± 0.45 out of 5. By sub-area, support had the highest score and spirituality had the lowest score [Table 2].

3. Differences in academic burnout, self-esteem, and resilience according to general characteristics

Academic burnout showed a significant difference according to grade ($F=4.17, p=.007$) and academic score ($F=5.98, p=.003$). As a result of post-hoc analysis, academic burnout of 3rd graders was significantly higher than that of 1st graders ($p=.011$). For academic scores of 2.0-2.9 points were statistically significantly higher than those of 3.0-3.9 ($p=.025$) and 4.0 or higher ($p=.004$). Self-esteem showed a significant difference according to academic score ($F=5.46, p=.005$). As a result of post-hoc analysis, 3.0~3.9 points ($p=.011$) and 4.0 points or higher ($p=.017$) were 2.0-2.9 points. It was statistically significantly higher than 2.9 points. Resilience showed a significant difference according to academic score ($F=5.25, p=.006$). As a result of post-hoc analysis, 3.0-3.9 points were statistically significantly higher than 2.0-2.9 points

($p=.006$) [Table 3].

4. Correlation between academic burnout, self-esteem, and resilience

Academic burnout showed statistically significant negative correlations with self-esteem ($r=-.519, p<.001$) and resilience ($r=-.528, p<.001$). In addition, self-esteem and resilience showed a statistically significant positive (+) correlation ($r=.623, p<.001$) [Table 4].

5. Mediating effect of resilience on the relationship between academic burnout and self-esteem

A three-step regression analysis was performed according to the procedure of Baron and Kenny [25]. As a result of the regression model analysis, the Durbin-Watson statistic was 1.74 (which was close to 2, indicating no autocorrelation), the tolerance was 0.717 (which was more than

0.1), and the Variance Inflation Factor was 1.40, which was less than 10. There was no problem of multicollinearity. Thus, the assumption of the regression analysis model was satisfied. As a result of analyzing the mediating role of resilience in the relationship between academic burnout and self-esteem, in the first stage, burnout had a significant negative effect on resilience ($\beta=-.53, p<.001$). In the second stage, burnout also had a significant negative effect on self-esteem ($\beta=-.52, p<.001$). Lastly, in stage 3, both academic burnout ($\beta=-.26, p<.001$) and resilience ($\beta=.48, p<.001$) were found to have significant effects on self-esteem ($F=77.03, p<.001$). Additionally, as a result of testing the significance of the mediating role of resilience, the Sobel test confirmed that resilience was a partial parameter in the relationship between academic burnout and self-esteem ($Z=-5.80, p<.001$) [Table 5].

Table 1. General Characteristics of Participants (N=209)

Characteristics	Categories	N (%)	M ± SD
Age (year)	≤23	163 (78.0)	22.74 ± 3.08
	≥24	46 (22.0)	
Gender	Male	46 (22.0)	
	Female	163 (78.0)	
Grade	1st	43 (20.6)	
	2nd	41 (19.6)	
	3rd	69 (33.0)	
	4th	56 (26.8)	

Cont... Table 1. General Characteristics of Participants (N=209)

Religion	Christianity	40 (19.1)	
	Catholicism	29 (13.9)	
	Buddhism	11 (5.3)	
	None	129 (61.7)	
Academic score	2.0□2.9	35 (16.7)	
	3.0□3.9	141 (67.5)	
	≥4.0	33 (15.8)	

Table 2. Levels of Academic Burnout, Self-Esteem, and Resilience (N=209)

Variables	Number of items	Possible score range	Min	Max	M ± SD
Academic burnout	15	1~5	1.27	5.00	2.58 ± 0.56
Exhaustion	5	1~5	1.00	5.00	3.13 ± 0.84
Cynicism	4	1~5	1.00	5.00	2.13 ± 0.77
Incompetence	6	1~5	1.00	5.00	2.42 ± 0.59
Self-esteem	10	1~4	1.40	4.00	2.94 ± 0.45
Resilience	25	1~5	2.36	5.00	3.66 ± 0.45
Hardiness	9	1~5	1.78	5.00	3.48 ± 0.62
Persistence	8	1~5	2.13	5.00	3.79 ± 0.52
Optimism	4	1~5	1.75	5.00	3.68 ± 0.62
Support	2	1~5	1.50	5.00	4.17 ± 0.62
Spirituality	2	1~5	2.00	5.00	3.33 ± 0.65

Table 3. Differences in Academic Burnout, Self-Esteem, and Resilience by Characteristics of Participants (N=209)

Characteristics	Categories	Academic burnout		Self-esteem		Resilience	
		M ± SD	t or F (p) Scheffé	M ± SD	t or F (p) Scheffé	M ± SD	t or F (p) Scheffé
Age (year)	≤23	2.57±0.52	-.642 (.521)	2.93 ± 0.44	-.201 (.841)	3.64 ± 0.44	-1.01 (.316)
	≥24	2.63±0.68		2.95 ±0.48		3.71±0.48	
Gender	Male	2.61±0.69	.308 (.759)	2.95 ± 0.46	.159 (.870)	3.63 ± 0.44	-.355 (.723)
	Female	2.57±0.52		2.93±0.44		3.66±0.45	
Grade	1st ^a	2.37±0.69	4.17 (.007) a < c	2.98 ± 0.43	1.89 (.133)	3.66 ± 0.41	2.15 (.095)
	2nd ^b	2.51 ± 0.56		2.88 ± 0.45		3.54±0.50	
	3rd ^c	2.74±0.57		2.86±0.49		3.63±0.48	
	4th ^d	2.61±0.56		3.04±0.37		3.77±0.38	
Religion	Christianity	2.47±0.45	2.33 (.057)	3.00 ± 0.38	1.89 (.114)	3.74 ± 0.40	2.38 (.053)
	Catholicism	2.71±0.56		2.80±0.33		3.55±0.45	
	Buddhism	2.67±0.52		2.86±0.54		3.65±0.43	
	None	2.59±0.58		2.95±0.47		3.65±0.46	
Academic score	2.0 ~ 2.9 ^a	2.84±0.53	5.98 (.003) a > b, c	2.72 ± 0.46	5.46 (.005) a < b, c	3.44 ± 0.37	5.25 (.006) a < b
	3.0 ~ 3.9 ^b	2.56±0.57		2.97±0.44		3.71±0.39	
	≥4.0 ^c	2.40±0.56		3.03±0.45		3.67±0.45	

Table 4. Correlations Among Academic Burnout, Self-Esteem, and Resilience (N=209)

Variables	Academic burnout	Self-esteem	Resilience
	r (p)	r (p)	r (p)
Academic burnout	1		
Self-esteem	-.519 (<.001)	1	
Resilience	-.528 (<.001)	.623 (<.001)	1

Table 5. Mediating Effect of Resilience on the Relationship Between Academic Burnout and Self-Esteem (N=209)

Step	Variables	B	S.E.	β	t	p	F(p)	R2	Adj.R2
1	AB → RS	-.43	.048	-.53	-8.86	<.001	78.54(<.001)	.279	.275
2	AB → SE	-.42	.048	-.52	-8.59	<.001	31.65(<.001)	.270	.266
3	AB → SE	-.21	.050	-.26	-4.18	<.001	77.03(<.001)	.436	.431
	RS → SE	.48	.063	.48	7.67	<.001			
Sobel test: Z=-5.80, p<.001									

AB = Academic Burnout; RS = Resilience; SE = Self-Esteem.

Discussion

Nursing students’ academic burnout score was 2.58 out of 5. The lower part had the highest burnout and the lowest apathy. In the study [21] using the same tool, the score was 3.24 out of 5. By sub-area, exhaustion was the highest and apathy was the lowest, supporting results of this study. This shows that nursing students are experiencing academic burnout due to stress caused by a combination of heavy studies and clinical practice. They are also

emotionally exhausted. Thus, it is necessary to come up with measures to reduce the degree of academic burnout and achieve academic success.

Self-esteem scored an average of 2.94 points out of 4, showing similar results to 3.01 and 2.85 points reported in previous studies [22, 23] using the same tool. Since self-esteem imparts positive values to the job as well as the development of human value system and personality [24], various educational efforts are needed to promote self-esteem during

the university period.

The average score of resilience was 3.66 out of 5. It was 2.46 in a previous study [25] that used the same tool. It was 3.70 or 3.07 in previous studies [7, 26] targeting nursing students. It seems to show difference depending on the individual's inclination and temperament.

As a result of analyzing the difference in burnout according to general characteristics, there was a significant difference in burnout according to grade level and academic performance. As a result of post-hoc analysis, third year students had significantly higher burn out than first year students. It is considered that academic burnout is high due to difficulty in performing clinical practice and theoretical classes at the same time for higher-grade nursing students with the burden of the national examination to obtain a nurse's license [27]. In addition, the lower the grade, the higher the burnout, consistent with study results of Moon & Lee [28]. It is taken for granted that students with lower grades have higher burnout due to difficulties in adjusting to college life. For them, continuous attention and extracurricular activities are required to improve college life adaptation. Self-esteem showed a significant difference according to academic performance. The higher the grade, the higher the self-esteem. Nursing students with high self-esteem are highly satisfied with their majors as high self-esteem has a positive effect on performing nursing tasks as future nursing professionals [29]. Thus, an educational plan to improve self-esteem is required. Resilience showed a significant difference according to academic performance. The higher the grade, the higher the resilience. This supported

the findings of Nam & Kim [13]. Resilience can overcome adversity and difficulties, give positive meaning to life, and induce active actions [30]. Since resilience is an individual's ability that can be improved through education or training [31], various efforts are needed to improve the resilience of nursing students through university curriculum.

There was a statistically significant negative correlation between academic burnout and self-esteem. Although it was difficult to compare this with the literature due to the lack of previous studies targeting nursing students, it was found to be consistent with study results of Kim & Lee [9] on elementary school students. It was confirmed that the higher the academic burnout, the lower the level of self-esteem. The higher the self-esteem, the lower the internalization problems such as anxiety and depression [32]. The higher the self-esteem, the less it forms a shield against emotional problems and behavioral difficulties [33]. Thus, a multi-faceted strategic effort is required for reduction. Self-esteem and resilience showed a statistically significant positive correlation, consistent with results of previous studies [7]. Therefore, it is necessary to seek various interventions to increase the self-esteem of nursing students.

As a result of confirming the mediating effect of resilience on the relationship between academic burnout and self-esteem in this study, it was confirmed that resilience had a partial mediating effect with an explanatory power of 43.6%. In other words, it was confirmed that academic burnout of nursing students had an intensive effect on self-esteem. At the same time, it had an indirect effect on self-esteem through resilience as a medium. A

direct comparison is difficult as there are no previous studies confirming the mediating effect of resilience on the relationship between academic burnout and self-esteem of nursing students. In order to reduce academic burnout, it is necessary to increase resilience, which is an individual's ability. Kim^[34] has said that resilience is the same as the strength of the mind as the strength to take the adversity and difficulties that have come to you as a stepping stone for leaping. Kim^[34] has emphasized that resilience can be improved by training. Therefore, it can be said that there is a need for an intervention plan to increase the resilience of nursing students who are prone to experiencing academic burnout.

Conclusion

This study confirms that academic burnout is a factor influencing self-esteem and that resilience has a partial mediating effect on the relationship between academic burnout and self-esteem. Therefore, it is necessary to develop teaching methods, curriculum openings, and extra-curricular programs to reduce academic burnout of nursing students and increase their resilience. Based on results of this study, it is important to develop a program or curriculum that can increase resilience of nursing students in order to reduce their academic burnout and verify the effectiveness of such program or curriculum in the future.

Ethical Clearance: For ethical consideration of study subjects, data were collected after obtaining approval from the Institutional Review Board (IRB) of S university (IRB No: SMU-2020-08-008).

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